

Message Text

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ACTION OES-07

INFO OCT-01 EA-07 ISO-00 FEA-01 ACDA-07 CIAE-00 INR-07

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TO SECSTATE WASHDC PRIORITY 5493

USERDA WASHDC PRIORITY

INFO AMEMBASSY TOKYO

ERDA HQ GERMANTOWN MD

C O N F I D E N T I A L SECTION 1 OF 2 SEOUL 6478

DEPT FOR OES/NET/PM-V. ADLER

DEPT PASS NRC-J. LAFLEUR

USERDA FOR N. SIEVERING

TOKYO FOR W. HENOCK

E.O. 11652: GDS

TAGS: TECH KS

SUBJ: SCOPE AND GOALS OF KOREAN NUCLEAR POWER PLANT CONSTRUCTION
PLANS

REF: (A) SEOUL 6016, (B) SEOUL 5530, (C) SEOUL 4002,
(D) SEOUL 2397

SUMMARY: ROKS ARE SERIOUSLY PLANNING TO ACQUIRE SIGNIFICANT
ADDITIONAL NUCLEAR POWER ELECTRIC GENERATING CAPACITY AND
NUCLEAR PLANT CONSTRUCTION TECHNOLOGY. THEY ARE STUDYING
FINANCIAL FEASIBILITY OF UNDERTAKING. GOALS ARE TO DIVERSIFY
DEPENDENCE ON IMPORTED FUELS AND DEVELOP KOREAN COMPETENCE
IN THE CONSTRUCTION OF NUCLEAR PLANTS, TO REDUCE COST OF
DOMESTIC PLANTS, AND TO GAIN TECHNICAL CAPABILITY TO COMPETE
IN THE BIDDING FOR CONSTRUCTION OF OVERSEAS PLANTS.

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THEY KNOW THIS CAN BE ACCOMPLISHED ONLY IN CLOSE
COOPERATION WITH ADVANCED TECHNOLOGY COUNTRIES, PRIMARILY
THE U.S., AND SEEK TO FOSTER THIS END BY PRESENTING THEMSELVES
AS A MODEL NON-PROLIFERATION STATE. END SUMMARY.

1. DURING RECENT JOINT STANDING COMMITTEE ON ENERGY (REF A)
ROK ECONOMIC PLANNING, BANKING, SCIENTIFIC, AND INDUSTRIAL

REPRESENTATIVES EXPRESSED CONVICTION THAT IT IS FINANCIALLY AND TECHNICALLY FEASIBLE FOR THE KOREA ELECTRIC CO. (KECO) TO PLACE ORDERS FOR FOUR 1000 MWE CLASS NUCLEAR POWER STATIONS WITHIN TWO YEARS (PLANT NUMBERS FIVE, SIX, SEVEN, AND EIGHT), FOLLOWED BY ORDERS FOR CONSTRUCTION OF FOUR SLIGHTLY LARGER CAPACITY PLANTS (NUMBERS 9 THROUGH 12) WHICH WOULD BE IN OPERATION BY 1990. (REF B) SHOULD THESE PLANTS BE CONSTRUCTED, KECO'S NUCLEAR GENERATING CAPACITY WOULD BE INCREASED TO APPROXIMATELY 45 PERCENT OF THE NUCLEAR CAPACITY GOAL OF 23,2000 MWE BY THE YEAR 2000.

2. FEASIBILITY OF FINANCING CONSTRUCTION OF PLANTS CITED PARA 1 DEPENDS HEAVILY UPON FOREIGN CREDIT WHICH USUALLY COVERS BETWEEN 64 AND 72 PERCENT OF PLANT COST. KDI'S PLANNING NECESSARILY INCLUDES AN ASSESSMENT OF AVAILABILITY OF LOANS FROM U.S., FRANCE AND THE FEDERAL REPUBLIC OF GERMANY (FRG). BOTH FRANCE (FRAMATOME) AND THE FRG (KRAFTWEK UNION) EACH HAVE CONTRACTS FOR CONSTRUCTION OF TWO 1000 KWE PLANTS IN IRAN WHERE CLIMATIC CONDITIONS FAVOR USE OF NON-EUROPEAN CONSTRUCTION COMPANIES SUCH AS KOREAN FIRMS WITH ESTABLISHED EXCELLENT PERFORMANCE RECORDS IN THE REGION. DELAY IN CONSTRUCTION OF PLANTS IN FRG IS WIDESPREAD AND POTENTIAL FOR CONSTRUCTION DELAYS IS HIGH IN FRANCE SO BOTH COUNTRIES CAN BE EXPECTED TO PRESS FOR FOREIGN PLANT ORDERS BY MAKING MONEY AVAILABLE. BASED UPON RELUCTANCE OF JAPANESE FIRMS TO BID ON NUCLEAR

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STEAM SUPPLY SYSTEMS FOR PLANTS 5 AND 6, IT APPEARS THAT JAPANESE FINANCING WILL BE AVAILABLE FOR ONLY SECONDARY PART OF PLANT (TURBINE-GENERATOR, ETC.) CONSTRUCTION. IT IS ESTIMATED THAT KECO'S EXPANSION PROGRAM FOR NEXT FIVE YEARS WILL REPRESENT 12 PERCENT OF TOTAL GROSS INVESTMENT IN THE ROK DURING THIS PERIOD. SUBSEQUENT TO 1981 KECO INVESTMENT IS EXPECTED TO EXCEED 12 PERCENT OF TOTAL GROSS INVESTMENT IN ROK. ABOVE INVESTMENT PROJECTION IS PART OF KOREA DEVELOPMENT INSTITUTE'S (KDI) PLAN (REF C) ACCEPTED BY MINISTRY OF COMMERCE AND INDUSTRY AND KECO IN PAST WEEK FOR REORGANIZING OF KECO'S INVESTMENT, PRICING, ORGANIZATIONAL AND OPERATIONAL PRACTICES.

3. KOREA'S PURPOSES IN THIS RAPID DEVELOPMENT ARE THREEFOLD: A) MINIMIZING THE COST OF FULFILLING DOMESTIC ENERGY NEEDS: WITH KOREAN FIRMS PERFORMING A LARGER SHARE OF NUCLEAR PLANT CONSTRUCTION, A SIGNIFICANT 15 PERCENT OF TOTAL PLANT COST, IMPORTANT SAVINGS CAN BE REALIZED. ONE MAJOR KOREAN COMPANY IS ALREADY BECOMING EXPERIENCED IN PLANT CONSTRUCTION. KO-RI 1 SITE PREPARATION AND STRUCTURES ERECTION INCLUDING CONTAINMENT BUILDING CONSTRUCTION AS WELL AS SIMILAR KO-RI 2 WORK WERE SUB-

CONTRACTED TO HYUNDAI CONSTRUCTION CO. LTD., A KOREAN FIRM OF THE HYUNDAI CONGLOMERATE WHICH HAS SPECTACULAR RECORD OF SUCCESSFULLY ABSORBING FOREIGN TECHNOLOGY IN PROFITABLE UNDERTAKINGS. SAMSUNG HEAVY MACHINERY CO. HAS ALSO SHOWN INTEREST IN ENTERING THE NUCLEAR PLANT CONSTRUCTION FIELD; B) BROADENING LOCAL TECHNICAL COMPETENCE FOR THE PURPOSE OF COMPETING IN OVERSEAS COMPETITION FOR NUCLEAR POWER CONSTRUCTION AND CIVIL ENGINEERING SERVICES: AS PREVIOUSLY REPORTED HYUNDAI INTERNATIONAL CORP. HAS ALREADY ACQUIRED A GENERAL ELECTRIC CO. (U.S.) LICENSE FOR MANUFACTURE OF STEAM TURBINES IN THE CAPACITY RANGE 200 MWE AND UP, INCLUDING SATURATED STEAM NUCLEAR TURBINES. THE SAME FIRM IS NOW NEGOTIATING A LICENSE

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C O N F I D E N T I A L SECTION 2 OF 2 SEOUL 6478

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WITH A U.S. CONTAINMENT BUILDING AIRLOCK MANUFACTURER. REGARDING NUCLEAR TURBINE MANUFACTURING, THE POOR PERFORMANCE OF UK GENERAL ELECTRIC AT KO-RI 1 COULD WELL HAVE BEEN SUFFICIENT INCENTIVE FOR HYUNDAI TO ENTER THE FIELD. THE ABOVE LICENSING ARRANGEMENTS WOULD BE MUTUALLY PROFITABLE ONLY IF HYUNDAI WERE ABLE TO OBTAIN A NUMBER OF PLANT CONSTRUCTION CONTRACTS IN THE MIDDLE EAST, PRIME TARGET MARKET, OR ELSEWHERE, C) AND ACQUIRING A GENERAL COMPETENCE IN NUCLEAR TECHNOLOGY BEFORE OTHERS DO

THE SAME. THE KOREANS VIEW THEIR SCIENTIFIC AND TECHNOLOGICAL PROGRESS AS A PRIME ASSET IN DEALING WITH ASIAN NEIGHBORS, FRIENDLY AND OTHERWISE. THEY FEEL PROVEN COMPETENCE IN THE FIELD OF NUCLEAR TECHNOLOGY CAN COMMAND RESPECT AND AT THE SAME TIME PROVE PROFITABLE.

4. THEY KNOW THE ABOVE CAN ONLY BE ACCOMPLISHED IN CLOSE
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COOPERATION WITH ADVANCED TECHNOLOGY COUNTRIES, PRIMARILY THE U.S. THIS COOPERATION IN TURN OF COURSE MUST BE PREDICATED UPON EXEMPLARY ADHERENCE TO THE NON-PROLIFERATION TREATY. AWARE OF THIS THE NATIONAL SYSTEM OF SAFEGUARDS AND INTERNATIONAL COOPERATION DIRECTORATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY HAS REQUESTED SAFEGUARDS INSPECTOR AND SAFEGUARDS EQUIPMENT MAINTENANCE TECHNICIAN TRAINING IN THE U.S. (REF D).

5. IT SHOULD BE NOTED THAT AS RECENTLY AS FEBRUARY 1977 KEOCO'S OFFICIAL LONG RANGE PLAN FOR CONSTRUCTION OF NEW GENERATING CAPACITY THROUGH 1986 INCLUDED ONLY NUCLEAR PLANTS 5 AND 6. ADDITIONALLY, IN APRIL KDI'S PRESIDENT KIM MAHN JE FAVORED LIMITING KOREA'S FUTURE RELIANCE ON NUCLEAR FUEL BUT KDI HAS SINCE BECOME THE LEADING EXPONENT OF GREATER EMPHASIS ON THE USE OF NUCLEAR FUEL. THE SWITCH TO NUCLEAR, AT THE EXPENSE OF OIL RATHER THAN COAL BECAUSE INCREASED USE OF IMPORTED COAL IS ALSO PLANNED, APPEARS TO HAVE BEEN PROMPTED BY SEEMING AVAILABILITY OF FINANCING, EAGERNESS OF REACTOR MANUFACTURERS FOR EXPORT SALES AND ROK CONFIDENCE IN BEING ABLE TO ACQUIRE PLANT CONSTRUCTION EXPERTISE WHICH IS MARKETABLE IN THE MID EAST.
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